

Today's student populations are increasingly diverse. Students may be the first in their family to undertake an HE course, have come to HE through an access course or foundation degree, be attending as a part-time student or have work experience and vocational qualifications. They could be coming back to education after a long break, have very different cultural backgrounds or have commitments outside of learning and teaching e.g. jobs and family. Much of the advice intended to support a more diverse student population can be considered effective teaching practice and supports **all** students in their learning.

This short guide brings together hints and tips on how you might support a more diverse student population, it is by no means comprehensive but intended to give you a starting point in thinking about student diversity and inclusivity in relation to teaching and learning in the biosciences.

Top tips

- All students are different, changing a teaching style or the way in which an assessment is implemented may benefit a wide range of students, not just those it is intended to support;
- Don't assume prior knowledge. Not all your students will have A-levels or have studied the same subjects;
- Do you, your colleagues and your students know how to get in touch with your institutions' disability and equality service?
- Don't assume students understand cultural references or colloquialisms, either written or verbal;
- Do ALL staff have the opportunity to undertake diversity and equality training?
- Consider how your students' backgrounds and prior experience, their qualifications and work experience could influence how they learn and approach HE;
- The transition to HE can be difficult for many students, have a read of the Centre's "Transition to Higher Education" Short Guide for ideas on making transition smoother;
- Students may not be familiar with self-directed study, does your institution have a study support centre or skills course?
- Do all of your students understand what is required of them to achieve in e.g. labwork and assessment?; and
- Most importantly, encourage students to let you know what their needs are.



“We all want to get the best out of our students. The possibility that our policies (including assessment) may not be enabling some of our students to achieve

Ruth Farwell, in the final report of the Ethnicity, Gender and Degree Attainment Project

Legal requirements

As well as improving learning for all, there are legal requirements associated with diversity and equality. The Single Equality Act, which came into force in October 2010, replaces all previous equality legislation (e.g. the Disability Discrimination Act). The Equality Act requires a proactive approach to shaping processes and the promotion of equality within institutions, rather than simply avoiding discrimination. As well as giving teaching staff and institutions the opportunity to take a fresh look at their current practice, implementing the Act can provide an opportunity to establish practices which could benefit all students. Information about the Equality Act aimed at HE is available from ECU (Equality Challenge Unit), www.ecu.ac.uk, and JISC Techdis, www.jisctechdis.ac.uk/sed.

What else might you consider?

Tutorials

- Ensure you are explicit about what students need to do in preparation for a tutorial;
- Encourage debate and questioning, perhaps online discussions might encourage students who are unsure of their speaking skills to participate?; and
- Establish some ground rules, e.g. “during every tutorial I will ask everyone to respond to at least one question”.

Lectures

- Provide a glossary of new vocabulary in advance;
- If students are justifiably unable to attend a lecture can they obtain a copy of any lecture notes (e.g. an electronic version through a VLE) and contact you with any questions?;
- Ensure reading lists are appropriate. New students could feel overwhelmed by a long list so highlight essential reading; and
- If possible make lecture slides or notes available beforehand, this could enable

dyslexic students or those whose first language is not English to better understand and follow the lecture. Making them available electronically means students can change colours, fonts etc. to suit their requirements.

Practicals

- Provide a glossary of new technical terms in advance;
- Give students the practical schedule in advance, so they know what is expected of them and can discuss with you any activities they would be unable to undertake. Perhaps have an assignment or short test that requires students to read the schedule; and
- Are students familiar with the equipment they may be using during practicals? They might find the lab less intimidating following an introduction to some of the equipment they may use. See for example, Virtual Analytical Lab (<http://hlsweb.dmu.ac.uk/ahs/elearning/RITA/>), the Open Educational Resources programme (www.bioscience.heacademy.ac.uk/resources/oer/OER1.aspx) or you could search YouTube (www.youtube.com) for films and animations on a huge variety of techniques.

Fieldtrips

- Ask students if they have any requirements on registration forms, so they can make you aware if they, e.g. require vegetarian or Halal food, a fridge to store medicine or a quiet, private space to use as a prayer room;
- Plan social activities which are not based on alcohol or going out to the pub;
- Can all of your students access the site? If not, is there a suitable alternative, providing a comparable learning experience, for those who can't?; and
- Make sure students know the types of activities they will be undertaking, and ask them to tell you in advance if there will be any they are unable to undertake.



cy infrastructure and some of our approaches to teaching and learning
ve their full potential is surely something that HEIs would wish to discuss.”

Assessment

- Are your students clear on how they will be assessed? e.g. multiple choice questions, essays, short answer questions, coursework, labwork, and what each type of assessment involves?;
- Do students have copies of grading and assessment criteria they can understand and use when completing assignments?;
- Provide examples of previous assignments, so students understand what is expected. For example, they may be unsure of what you mean by “produce a report”;
- If possible, have different methods of assessment during a course or module, e.g. essays, group presentations, poster presentations or short vivas;
- Do students know what plagiarism is, how to avoid it, and how to reference in the style required by your department or institution?;
- Make it clear how much weight grammar and spelling will have compared to content or the structure of an argument;
- Make questions clear, concise, unambiguous, and try to avoid cultural references; and
- Are you aware of holy days or religious festivals that could clash with assessment deadlines or exams?

Previous learning and experience

Students may have a wide range of educational experiences and qualifications, from BTECs and A-levels, to the International Baccalaureate. Knowing what these qualifications entail and understanding the experience your students have could give a real insight into how they approach HE. For example, courses where students haven't had to write essays, but have very practical experience may mean they are at home in the lab but could benefit from support to develop their writing skills. DirectGov, www.direct.gov.uk/en/EducationAndLearning/QualificationsExplained/, describes the

variety of qualifications available in the UK and gives some idea of the work and assessment methods involved. For international qualifications your institution's international or admissions offices may be able to provide details on what a specific qualification involves.

Differentiated learning

- Are more able and struggling students identified and offered support, or the opportunity to stretch themselves?;
- Are students on the borderline between degree classifications congratulated and offered advice and encouragement on how to improve their performance?;
- Are students aware of opportunities to publish their research, e.g. Bioscience Horizons (<http://biohorizons.oxfordjournals.org/>) or Re-Invention (www2.warwick.ac.uk/fac/cross_fac/iatl/ejournal/)?;
- If students have language difficulties are there opportunities for them to practice writing, speaking and comprehension in both formal and informal situations?; and
- Are there opportunities for students to develop their core skills, for example literacy and numeracy skills?

Outside of teaching

A student who is happy on their course and has a support network is more likely to stay in HE.

- Does your institution have a mentoring or peer support scheme for students?;
- Do you know how to put your students in touch with your institution's Chaplaincy, equality and diversity services, counselling services or international office?;
- Are new students aware of the range of societies and sports clubs they could join?; and
- Are there opportunities for meeting and socialising with other new students within the department?



Further resources

The Centre's **Diversity webpages**, with resources on widening participation, disability and accessible curricula, cultural and religious diversity, differentiated learning and internationalisation. www.bioscience.heacademy.ac.uk/events/themes/diversity.aspx

The Higher Education Academy **Inclusion webpages** bring together information and resources on; disability equality; degree attainment; widening participation; and student retention and success, including the final report of the Ethnicity, Gender and Degree Attainment Project. www.heacademy.ac.uk/ourwork/teachingandlearning/inclusion

Religious and Cultural Diversity

The Philosophical and Religious Studies Subject Centre **Faith Guides** aim to inform staff about how best to support students with a variety of religious beliefs. Six guides are currently available: Buddhism, Christianity, Hinduism, Islam, Judaism and Sikhism. www.prs.heacademy.ac.uk/publications/faith_guides.html

BBC Faith pages, information about world religions and a calendar of religious festivals and holy days. www.bbc.co.uk/religion/religions/

Differentiated learning

Differentiated Learning Report, report of a Centre Forum which considered how to stretch more able students. A number of related resources including lists of student research funding opportunities and conference bursaries are also available. www.bioscience.heacademy.ac.uk/resources/difflearn.aspx

Improving levels of literacy in science undergraduates, a programme which assessed undergraduates' ability to write, and used small-group teaching to give them intensive practise in writing at the beginning of their course. www.bioscience.heacademy.ac.uk/resources/projects/jones.aspx

Internationalisation

UKCISA (UK Council for International Student Affairs) have information for both you and your students, including information for UK students who wish to work or study abroad. www.ukcisa.org.uk/

Sitting exams in a second language, gives guidance on writing clear exam questions. www.brookes.ac.uk/services/hr/eod/guides/exams/

Asking culturally neutral questions in science and engineering, by Peter Goodhew. www.bioscience.heacademy.ac.uk/ftp/events/sltc07/papers/09goodhew.pdf

Suggestions for teaching international students more effectively, by Jude Carroll. www.brookes.ac.uk/services/ocsd/2_learnth/briefing_papers/international_students.pdf

Disability and Accessibility

JISC Techdis have advice, guidance and resources focussing on technology and inclusion. www.jisctechdis.ac.uk/

Learning Support for Disabled Students Undertaking Fieldwork and Related Activities, a series of six web-based guides. www2.glos.ac.uk/gdn/disabil/

Use My Ability, focuses on employability and disability and brings together practical advice to help students develop their employability skills. www.usemyability.org/

UK Centre for Bioscience short guide, **Inclusive Learning and Teaching in the Biosciences**. www.bioscience.heacademy.ac.uk/resources/shortguides.aspx

Induction, Transition and Retention

The **induction, transition and retention webpages** from the Centre bring together information and resources, including the Transition to Higher Education short guide. www.bioscience.heacademy.ac.uk/resources/themes/itr.aspx

